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FIG._1B

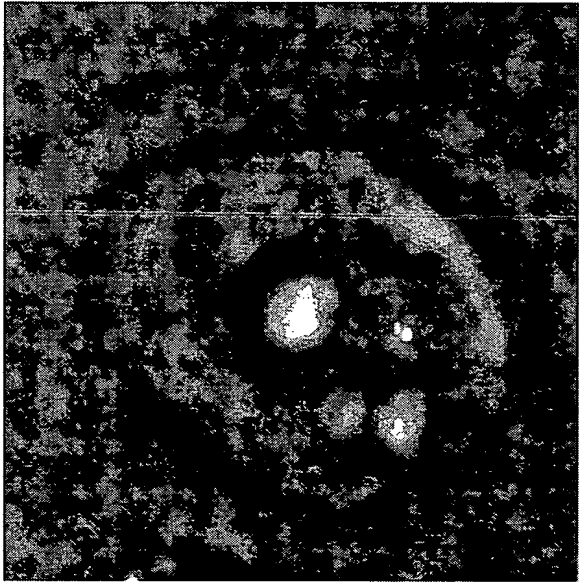


FIG._1D



FIG._1A

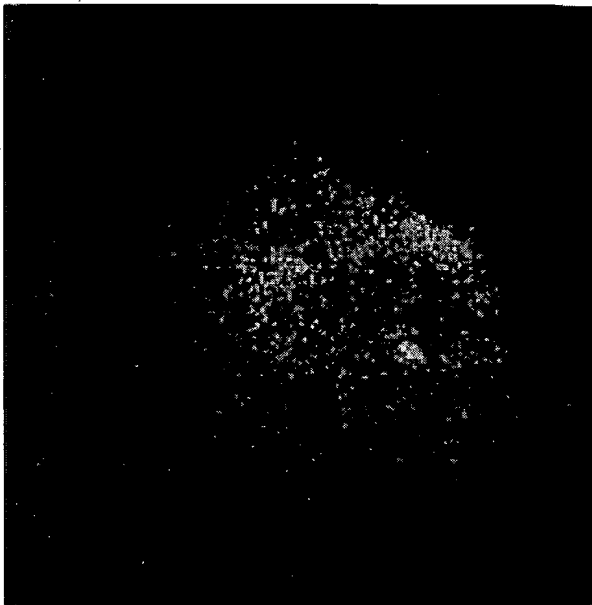


FIG._1C

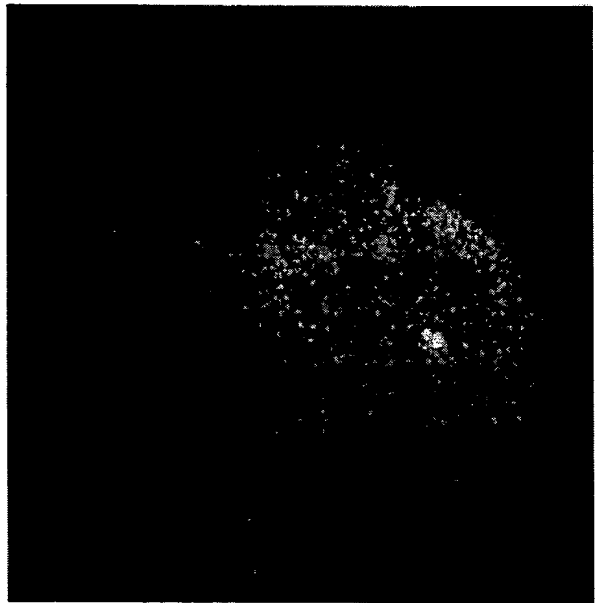


FIG. 2A

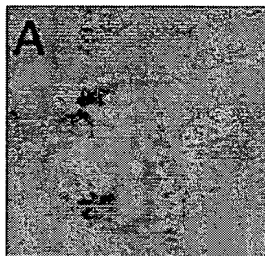


FIG. 2B

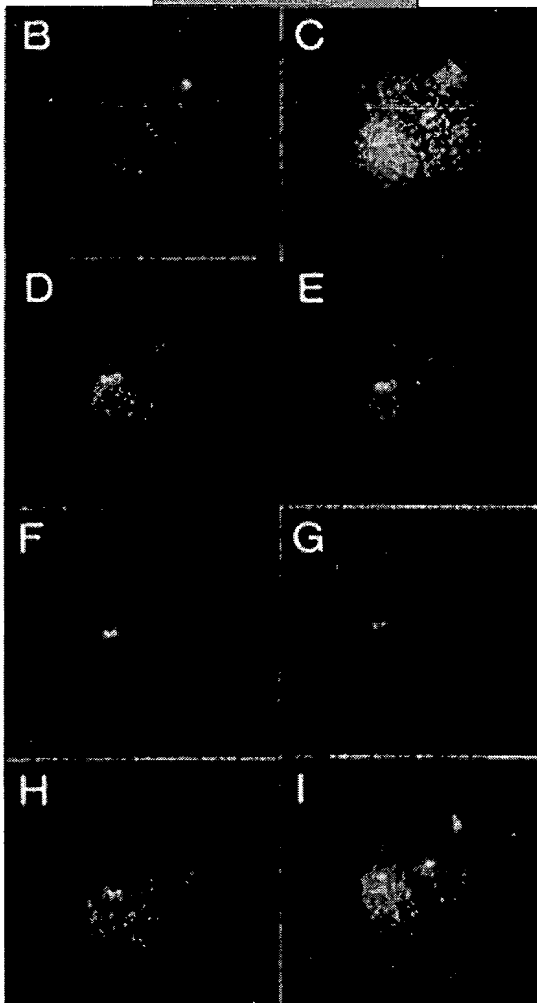


FIG. 2C

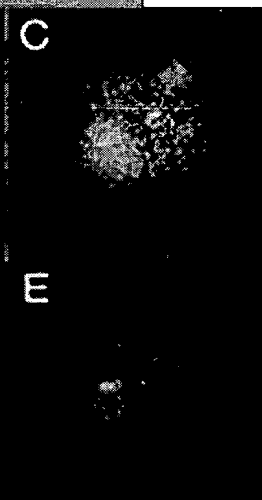


FIG. 2D

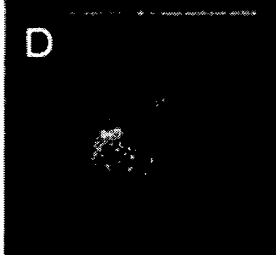


FIG. 2E

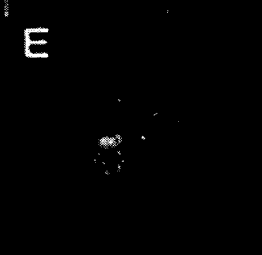


FIG. 2F

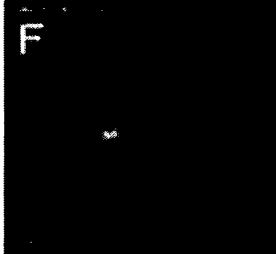


FIG. 2G

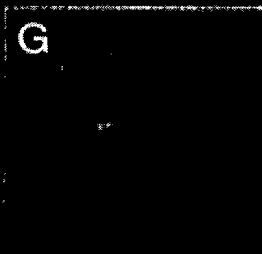


FIG. 2H

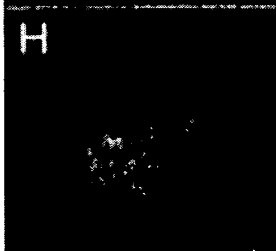


FIG. 2I

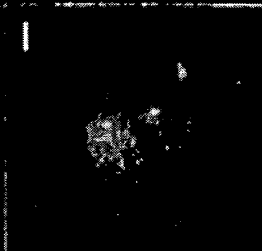


FIG. 2K

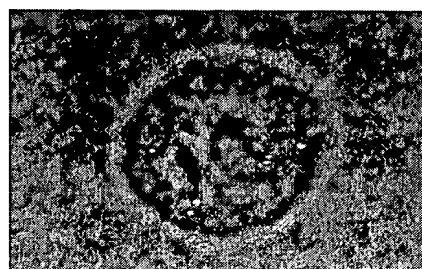
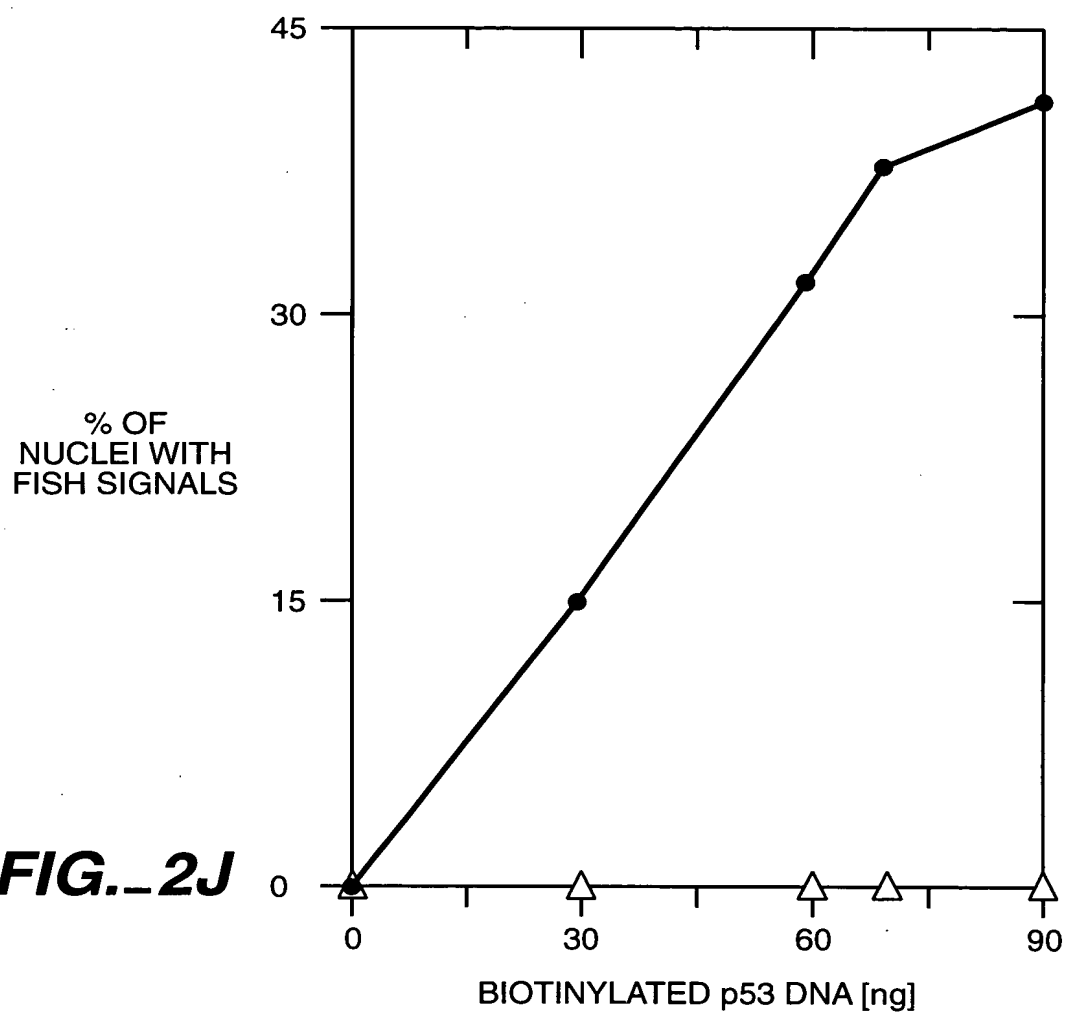
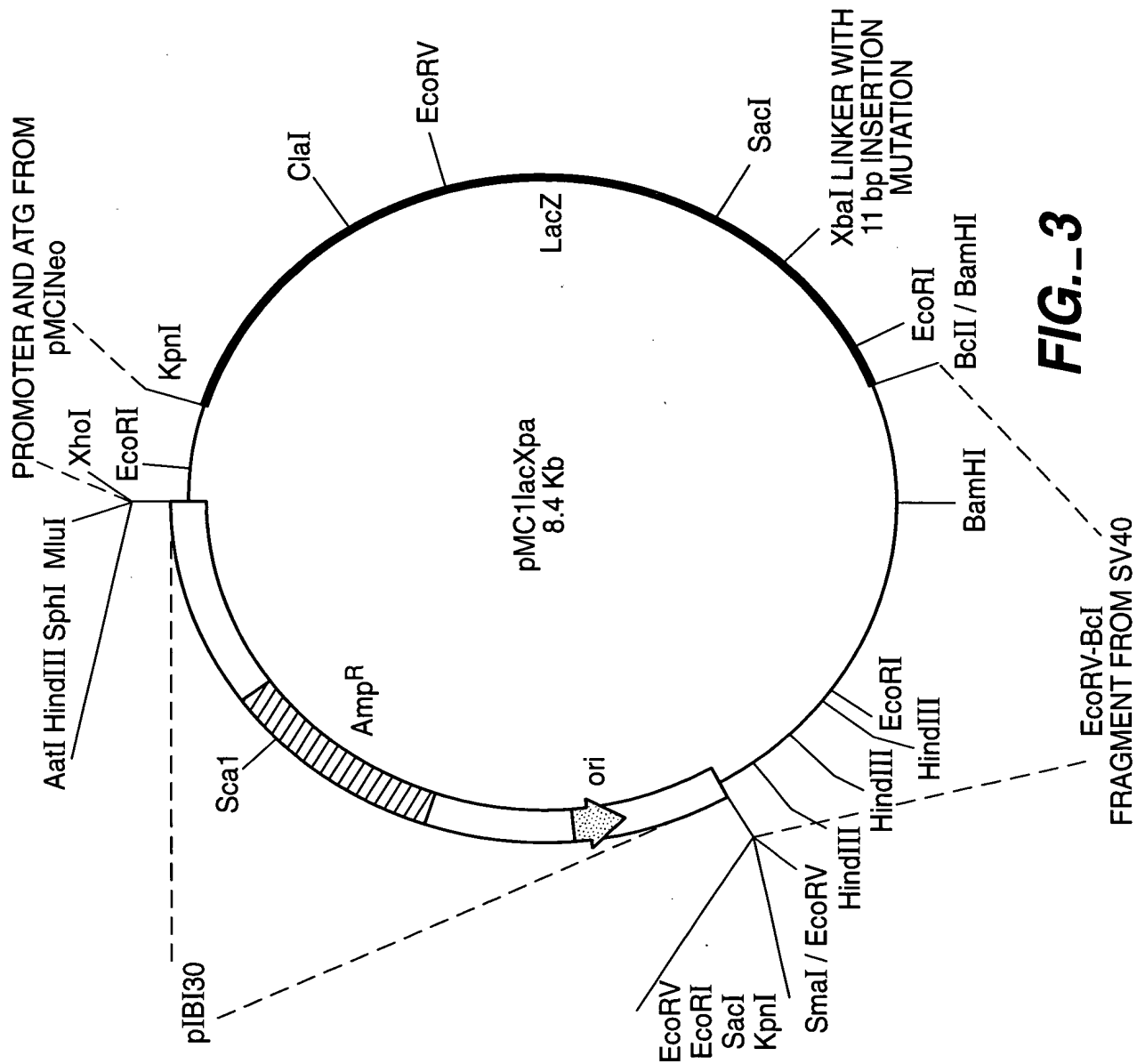
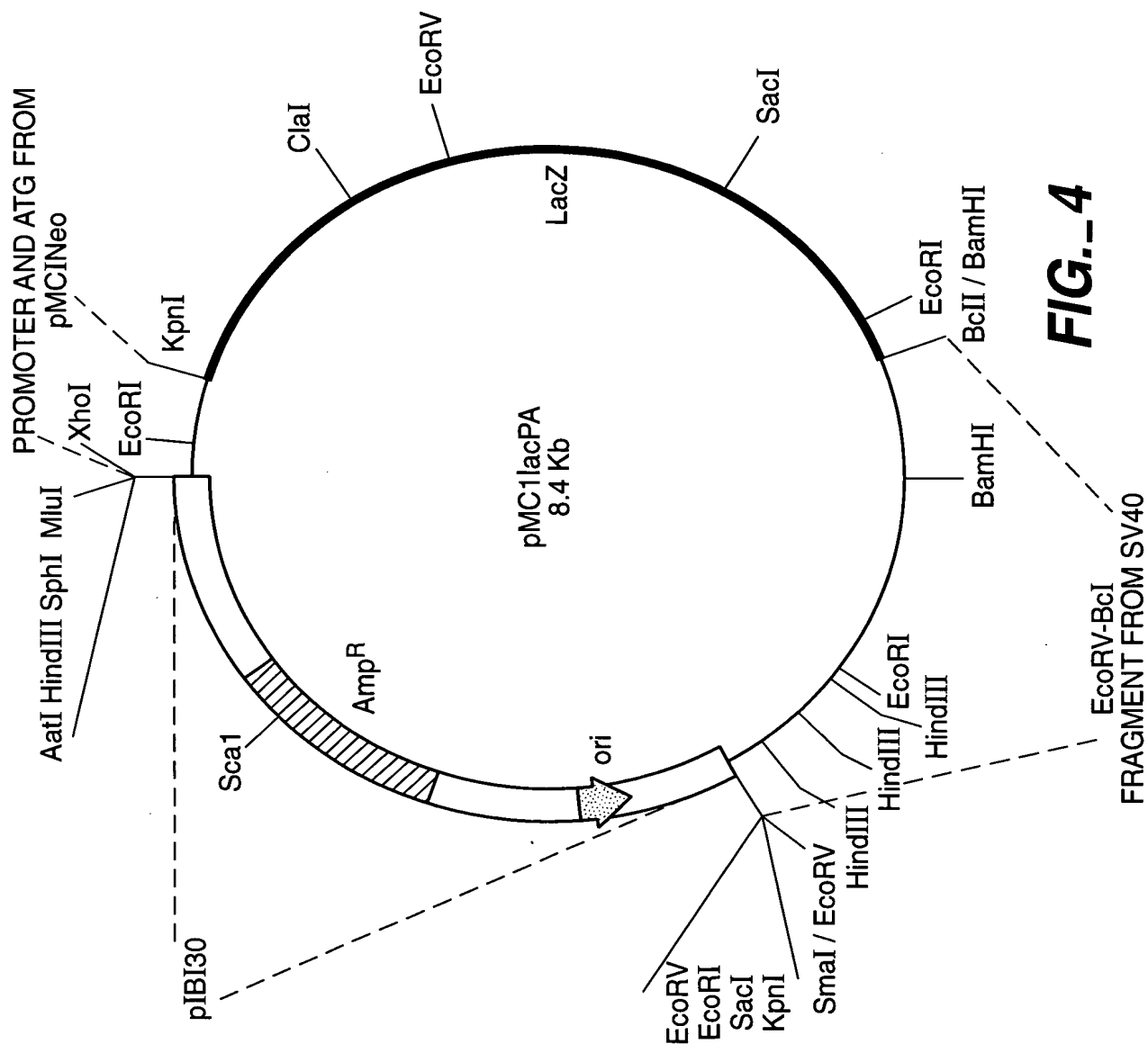


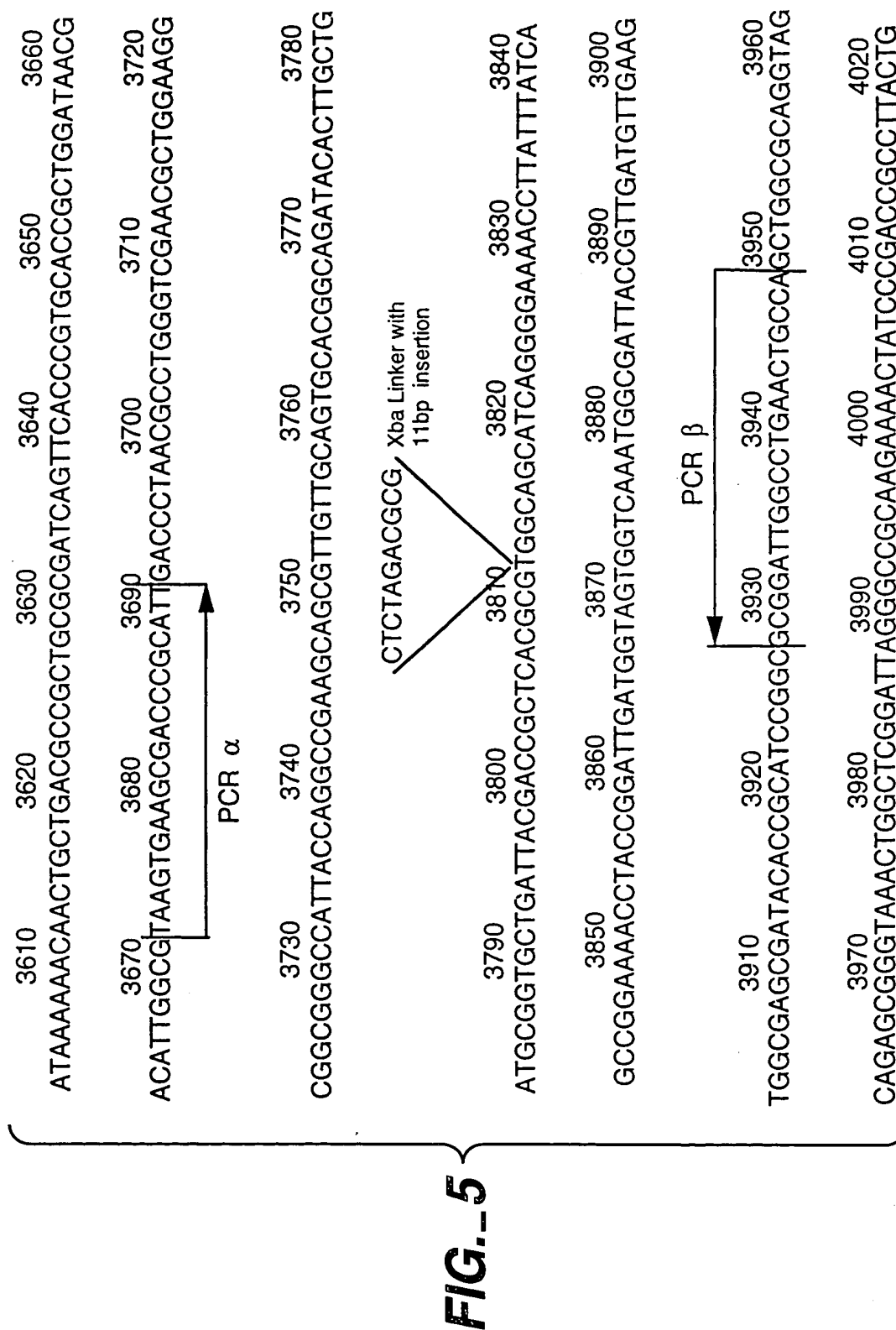
FIG. 2L

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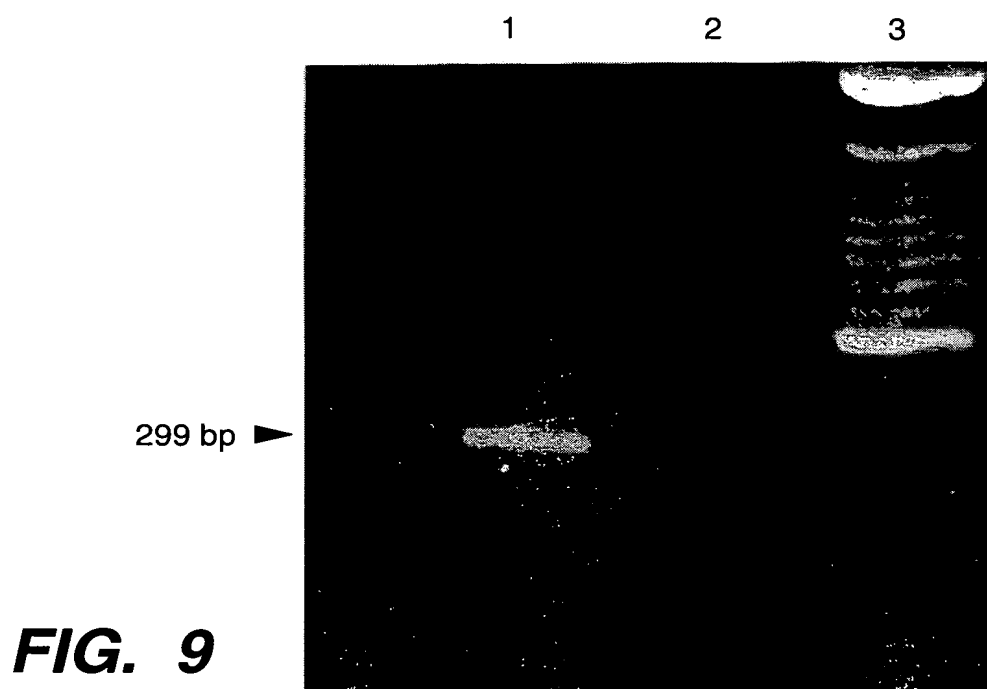
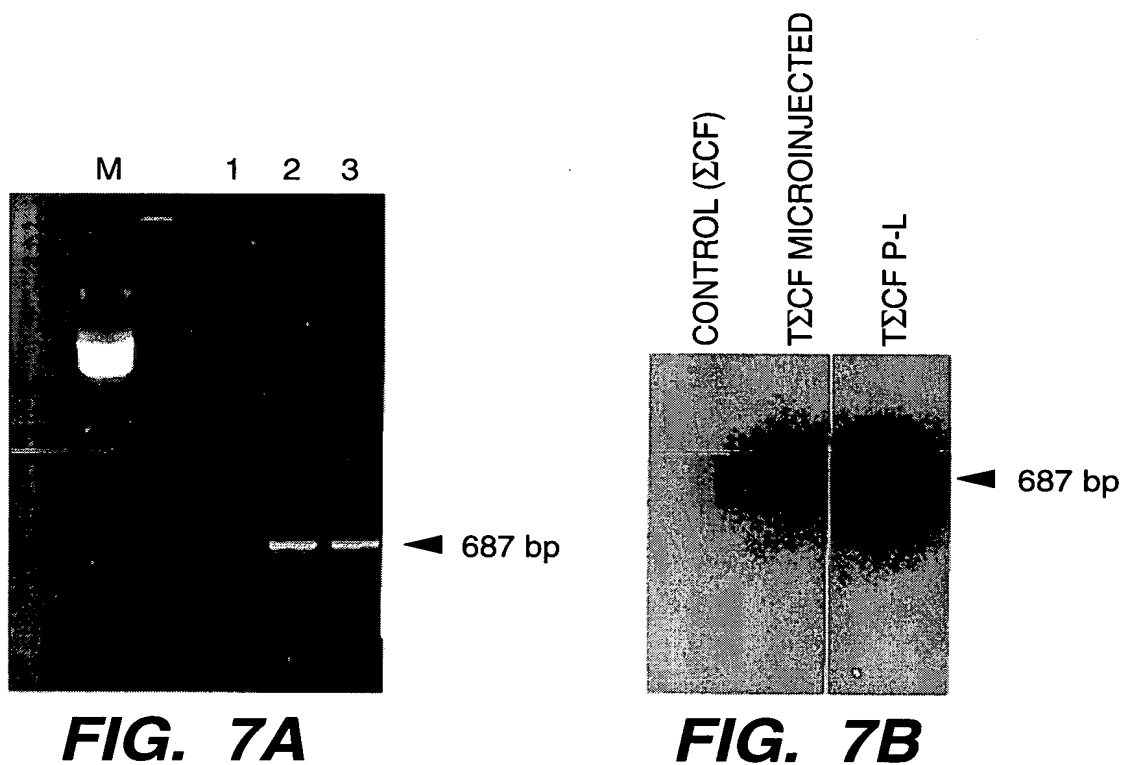
**FIG. 3**

**FIG. 4**



EXPERIMENTAL SAMPLE	INJECTED PLASMID, 276-mer DNA AND RecA PROTEIN	NUMBER OF INJECTED SURVIVING CELLS	NUMBER OF SURVIVING CELLS SCORING BLUE	SURVIVING CELLS SCORING BLUE (%)
1	pSV- β -gal -276-mer - RecA	168	21	12.5
2	pMC1lacpa -276-mer - RecA	98	9	9.2
3	pMC1lacXpa -276-mer - RecA	173	0	0
4	pMC1lacXpa +276-mer - RecA	103	0	0
5	pMC1lacXpa +276-mer + RecA	168	6	3.6

FIG.-6



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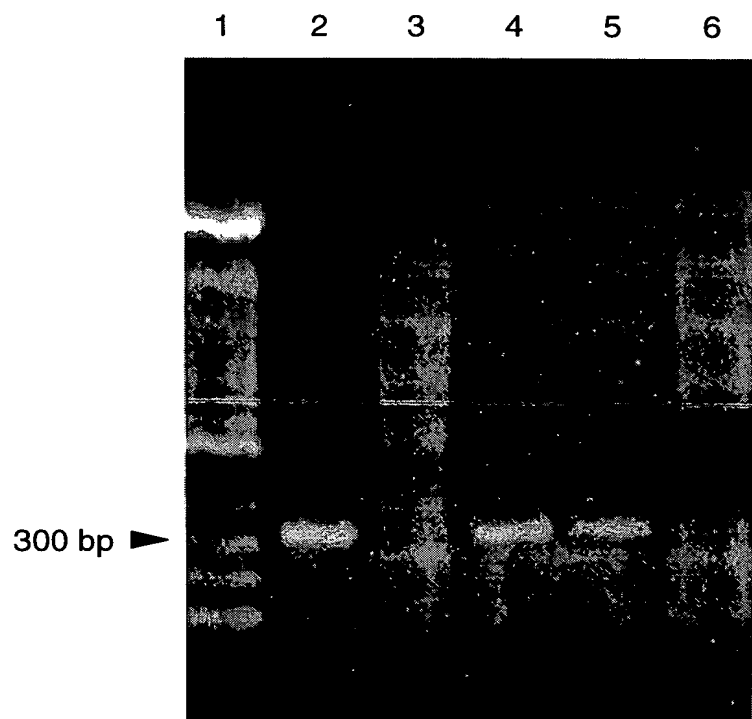


FIG._8A

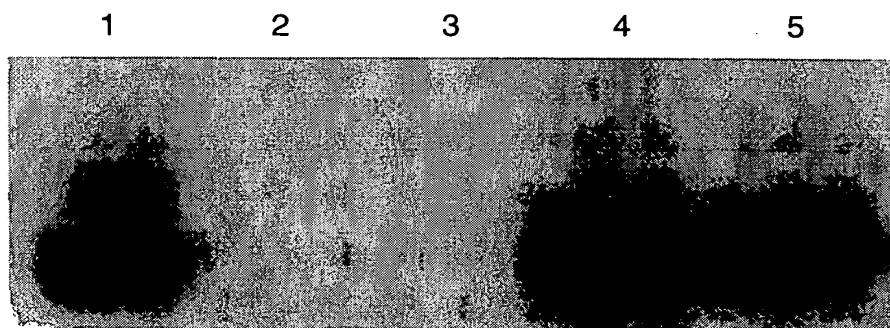


FIG._8B

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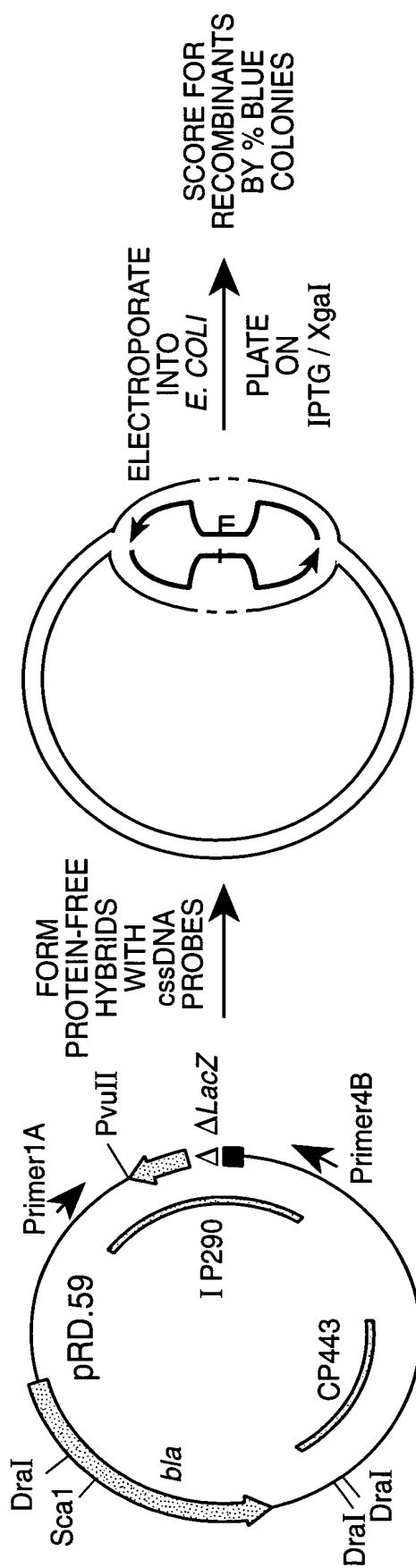


FIG._10

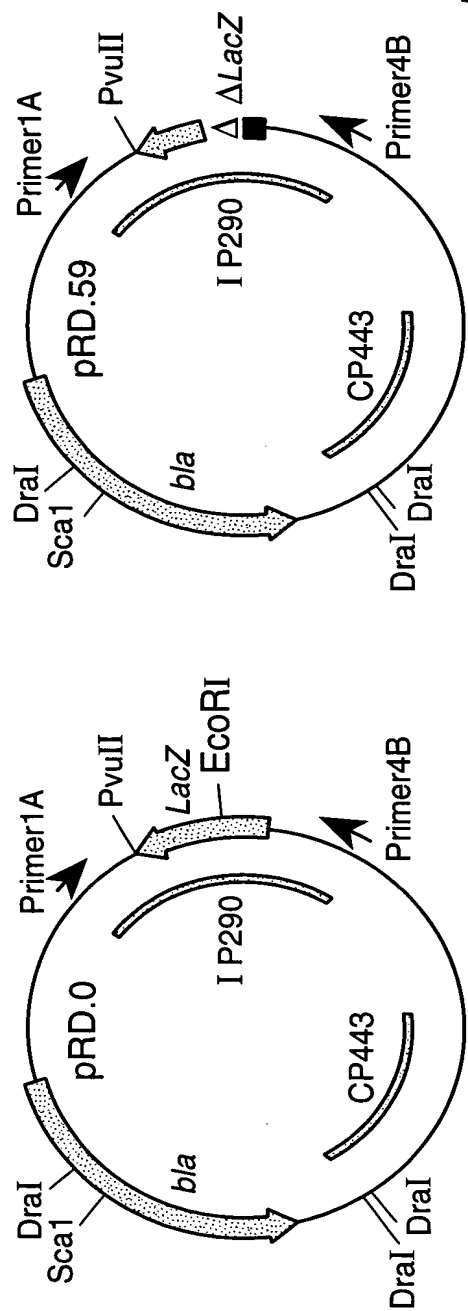


FIG._14A

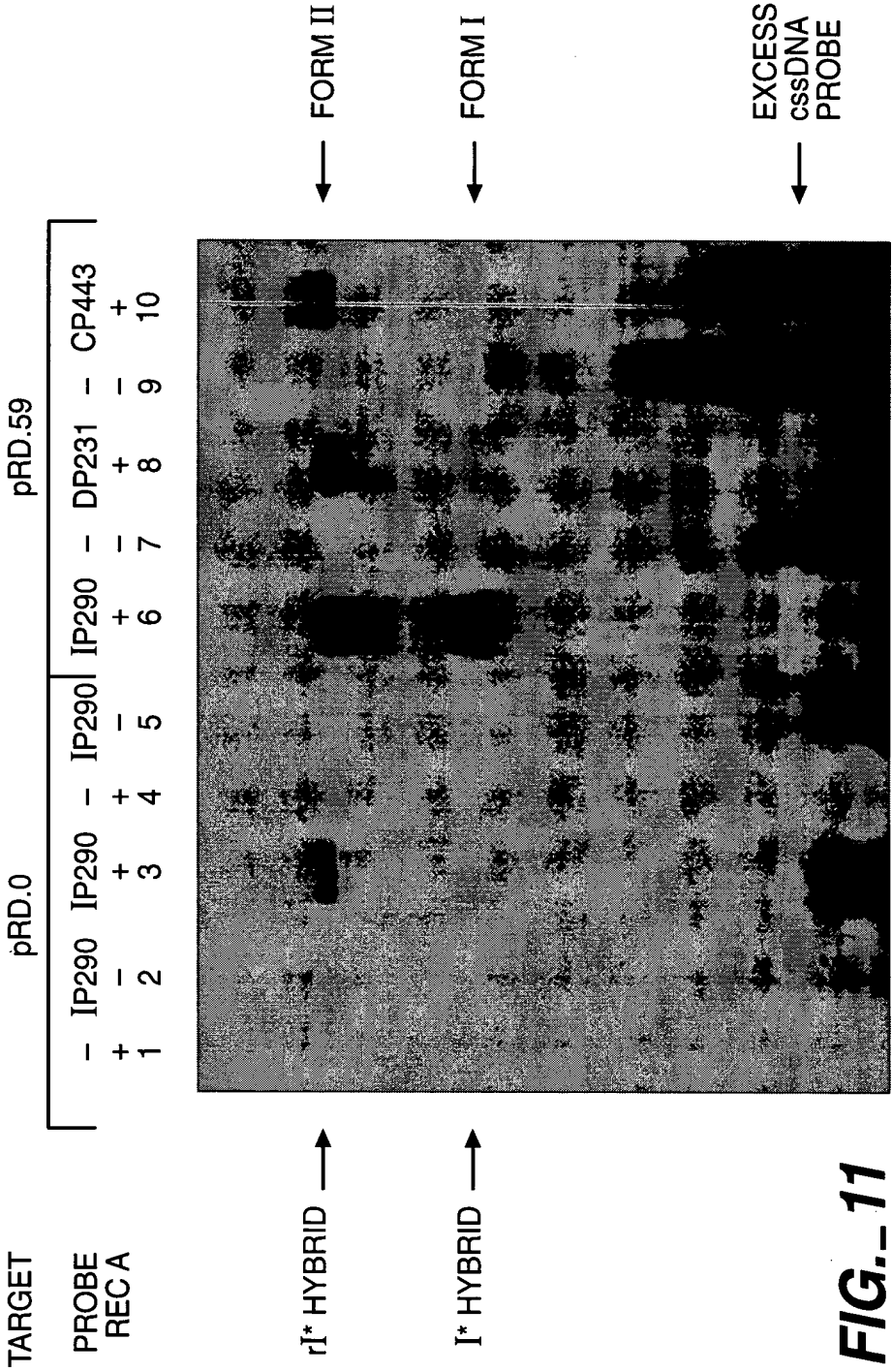
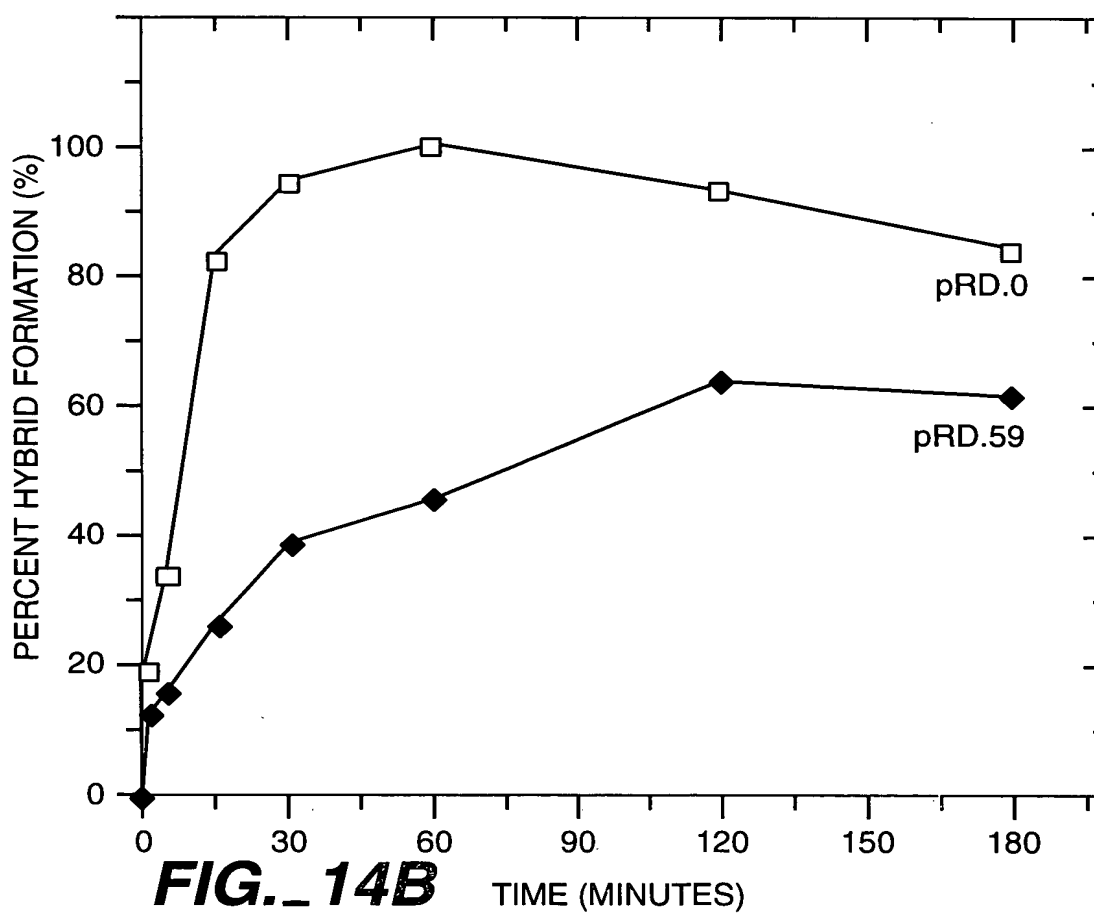
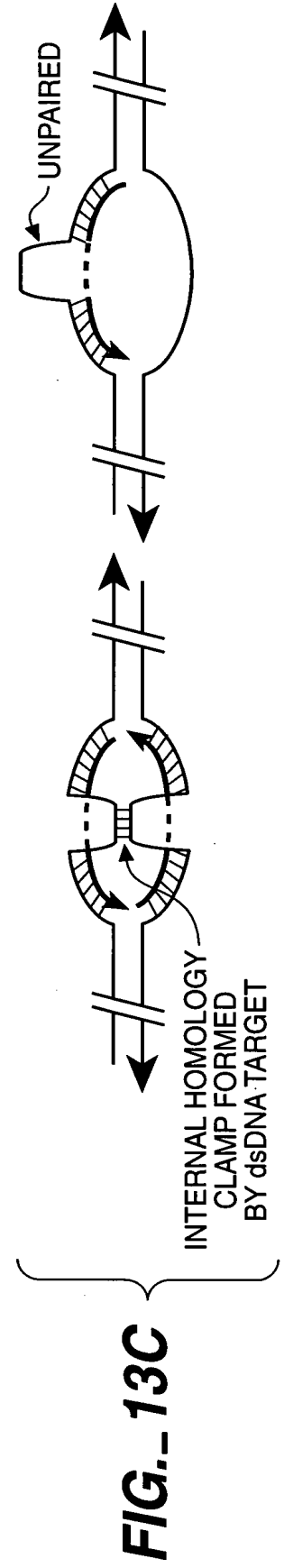
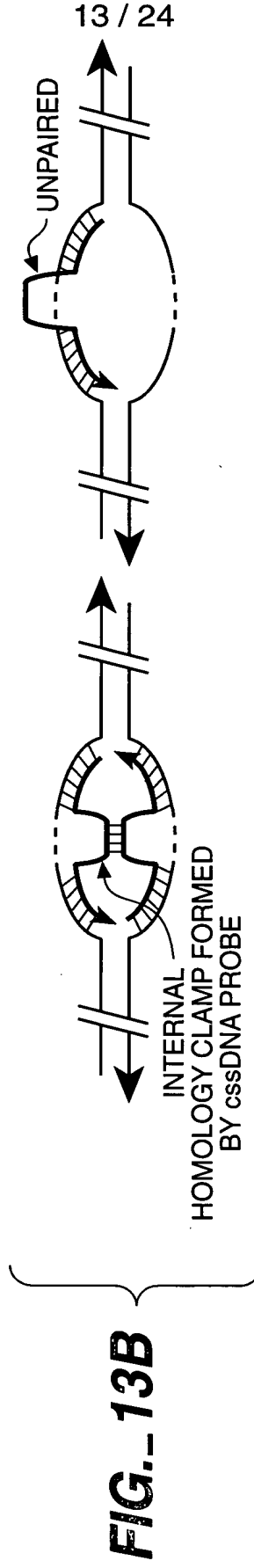
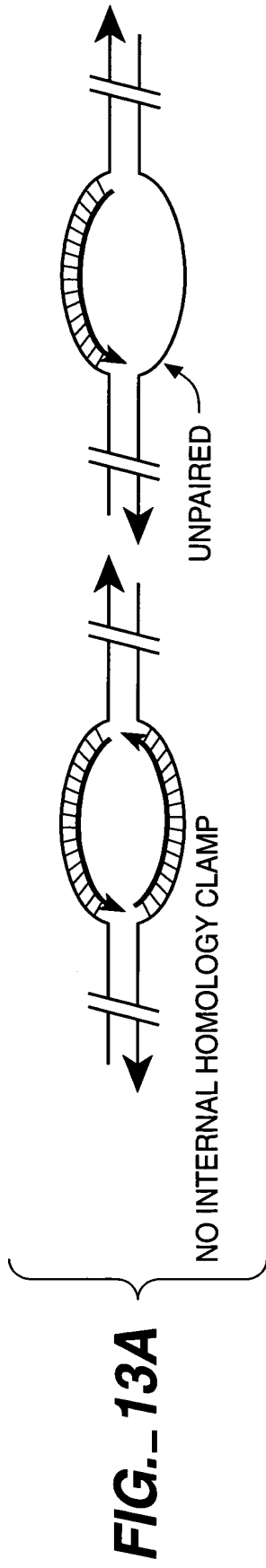


FIG._11

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TARGET PROBE		RecA COATING	HOST	% RECOMBINANT / TOTAL COLONIES
pRD.59	—	+	RecA+	0
	—	+	RecA—	0
pRD.59	IP290	—	RecA+	0
	IP290	—	RecA—	0
pRD.59	IP290	+	RecA+	3
	IP290	+	RecA—	0
pRD.59	DP290	—	RecA+	0
	DP290	—	RecA—	0
pRD.59	DP290	+	RecA+	0
	DP290	+	RecA—	0
pRD.59	CP443	—	RecA+	0
	CP443	—	RecA—	0
pRD.59	CP443	+	RecA+	0
	CP443	+	RecA—	0

FIG. 12



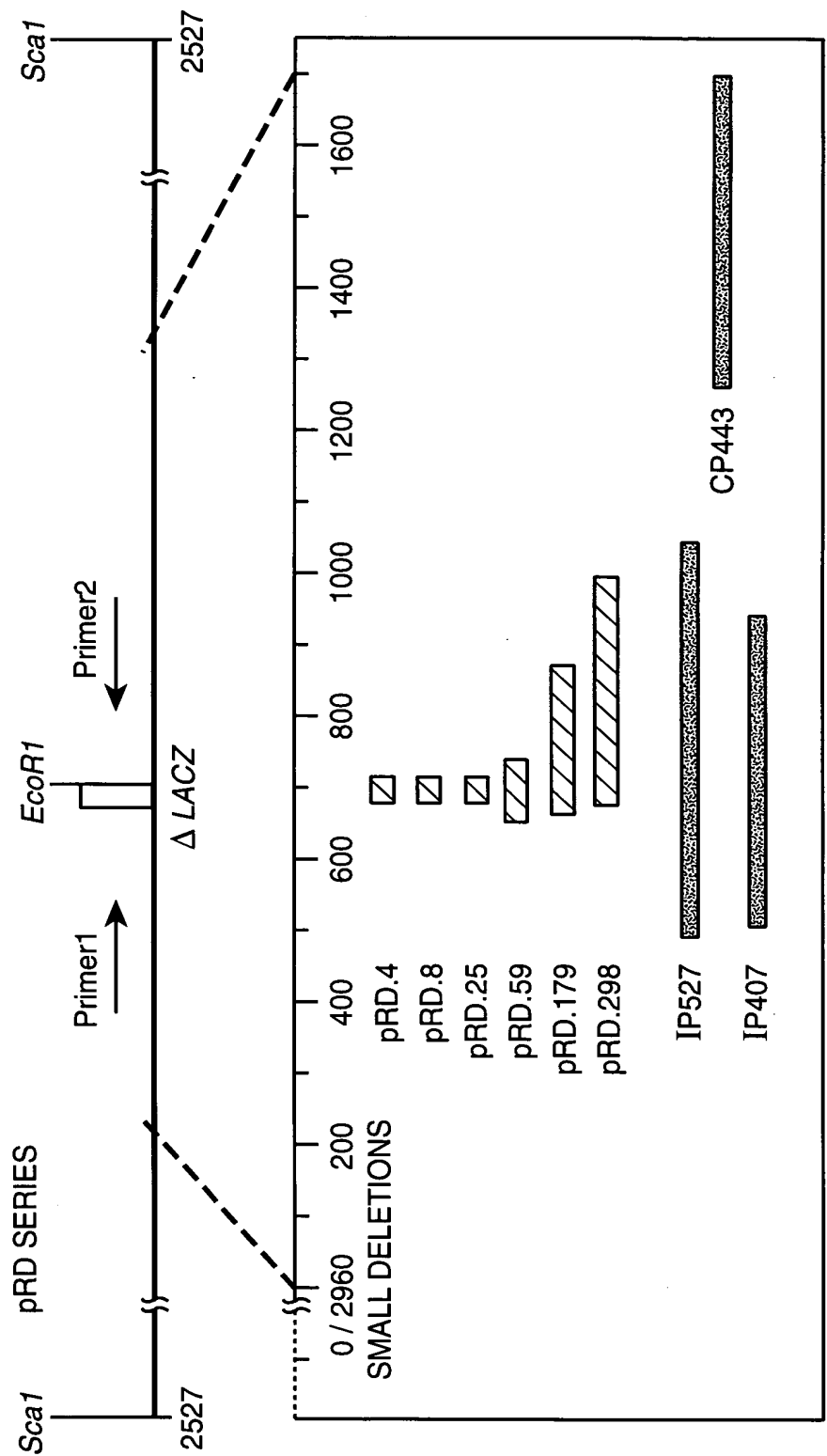
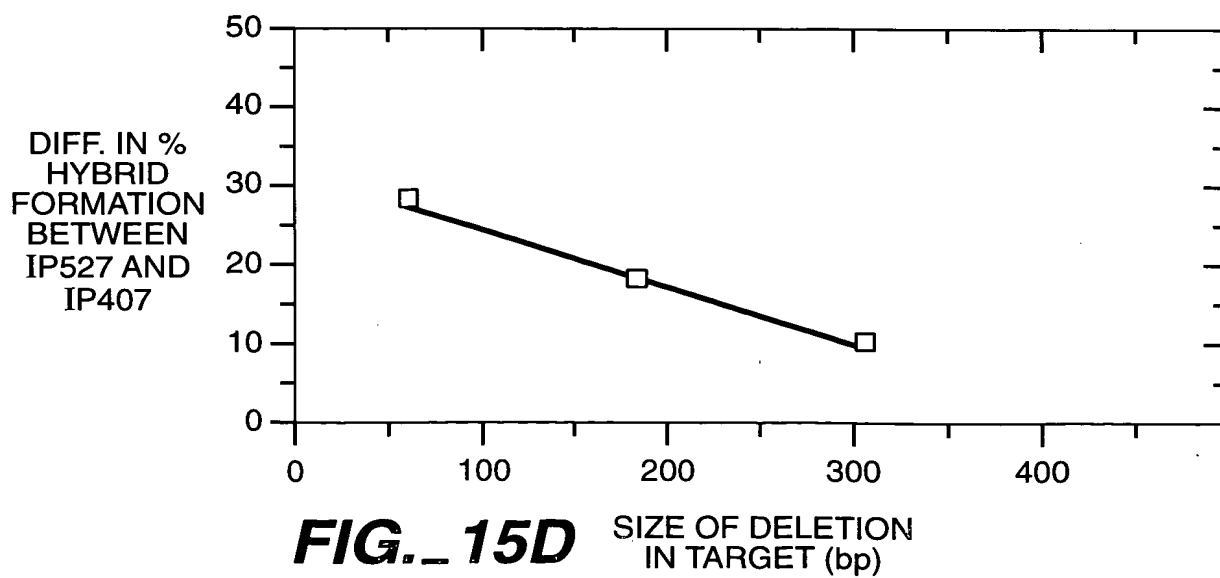
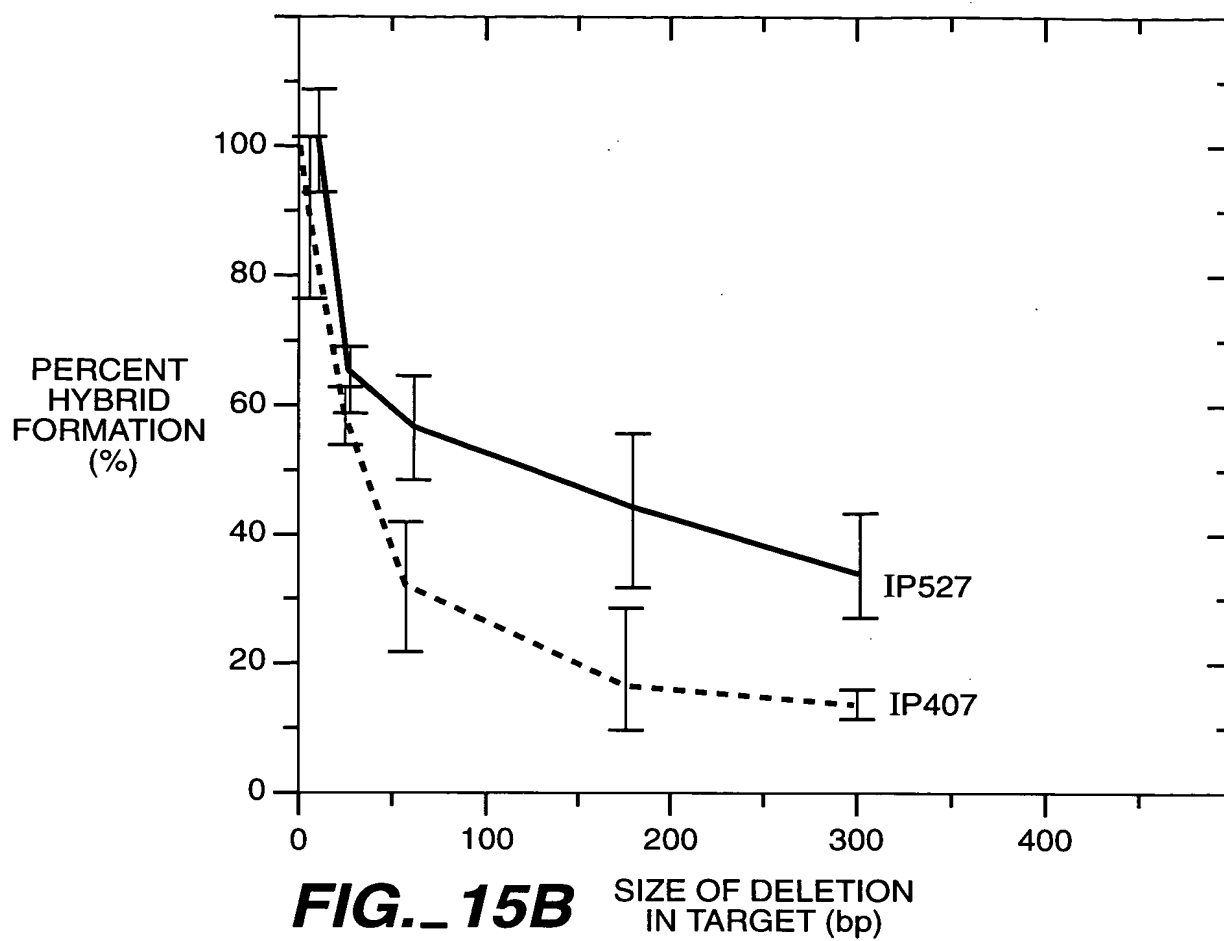
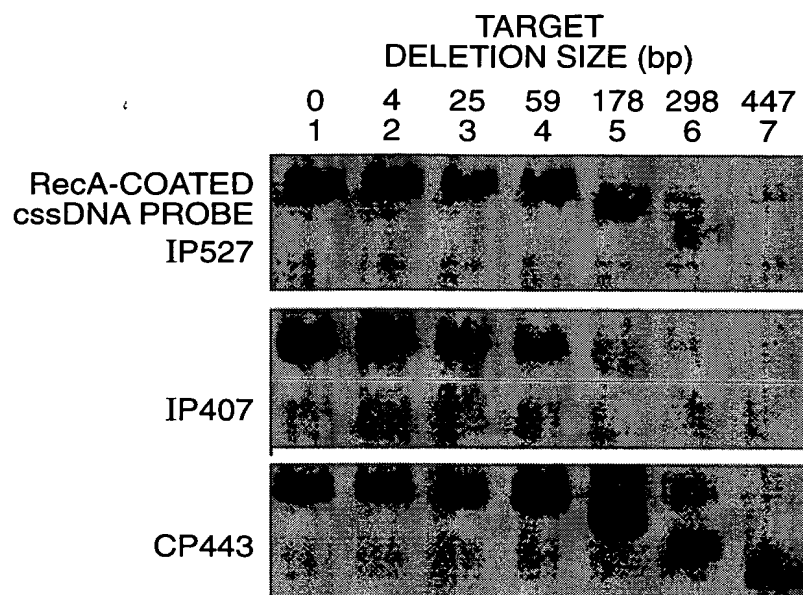
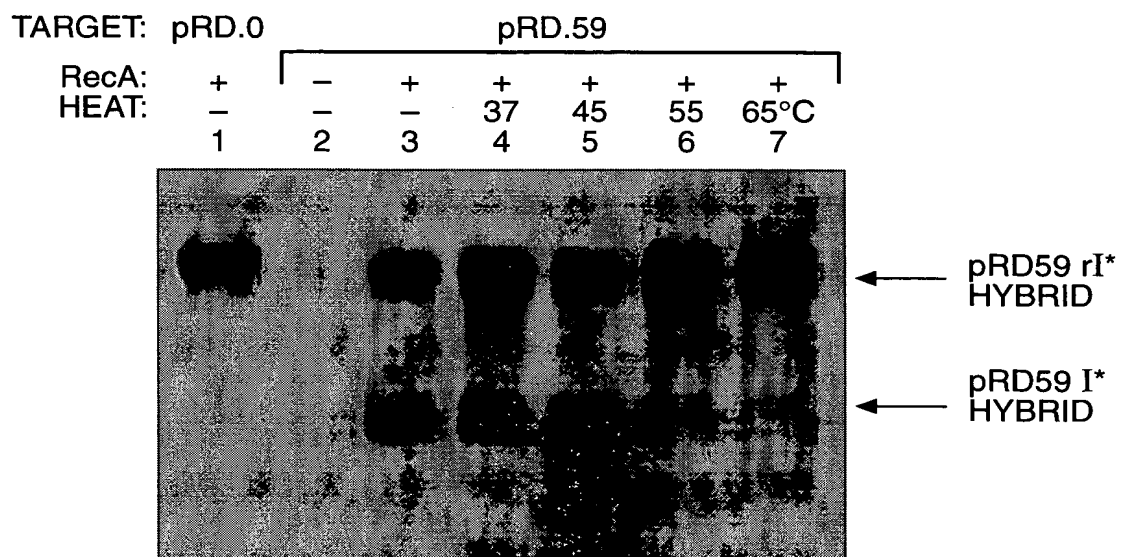


FIG. 15A

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**FIG._15C****FIG._19**

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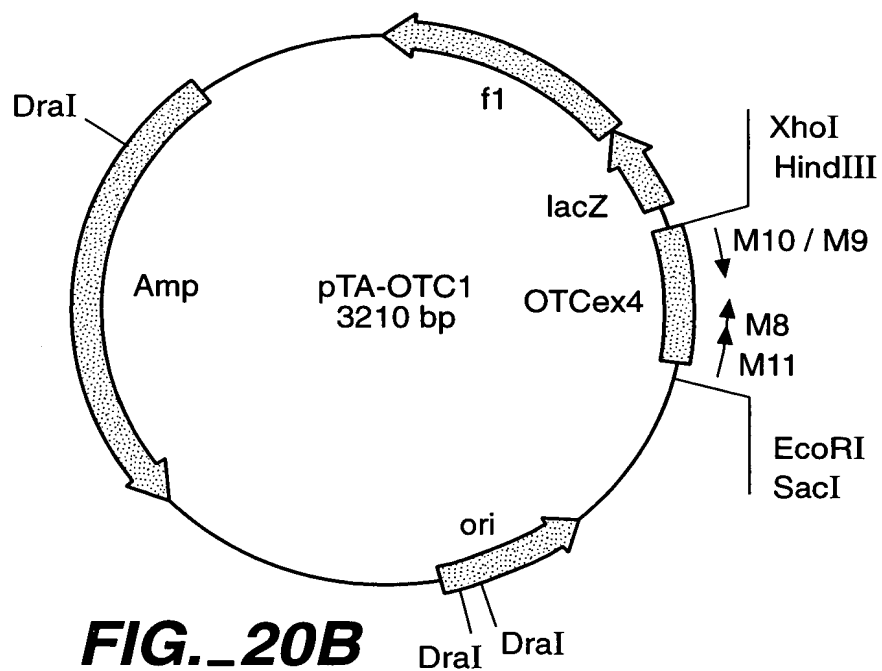
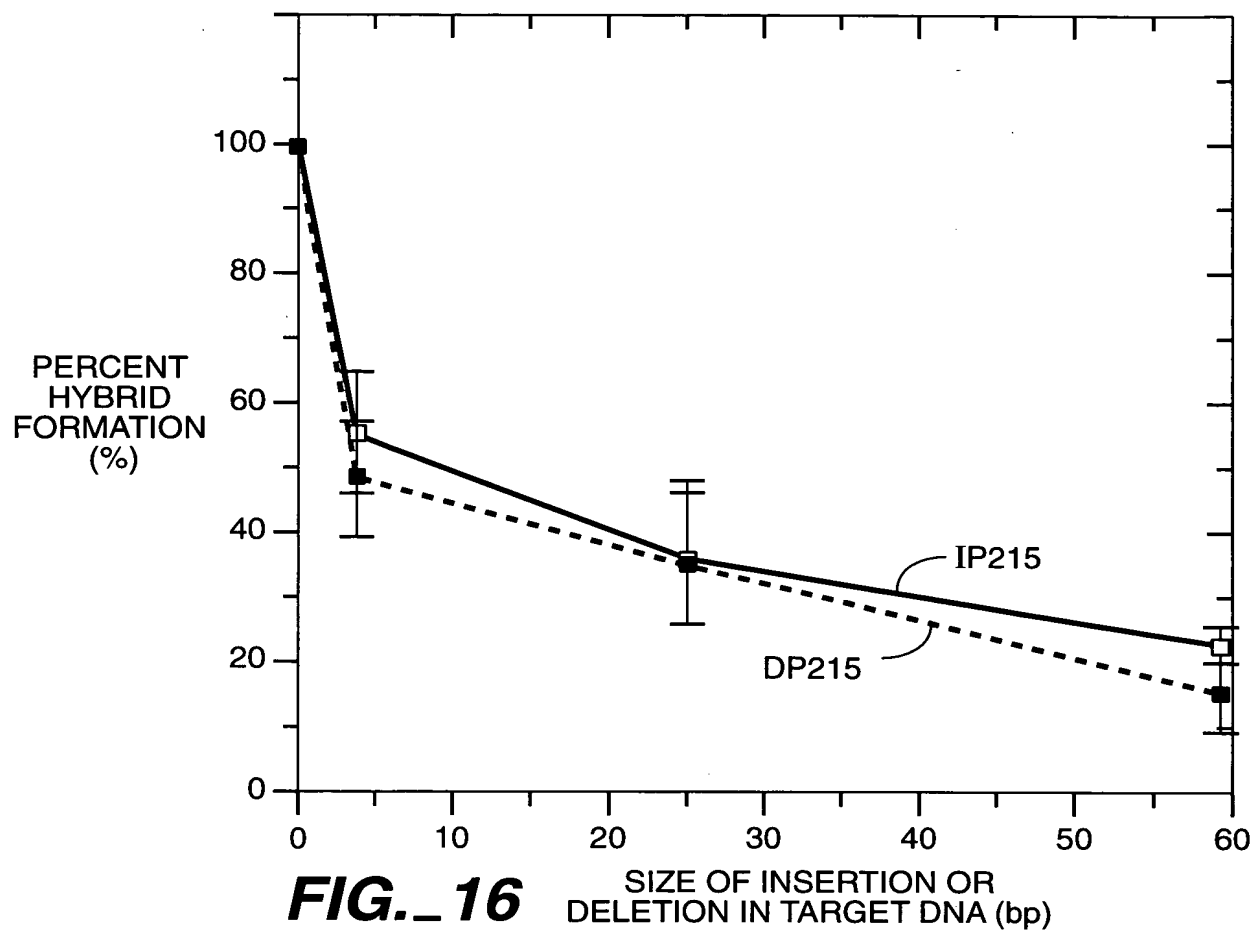


FIG. 17A

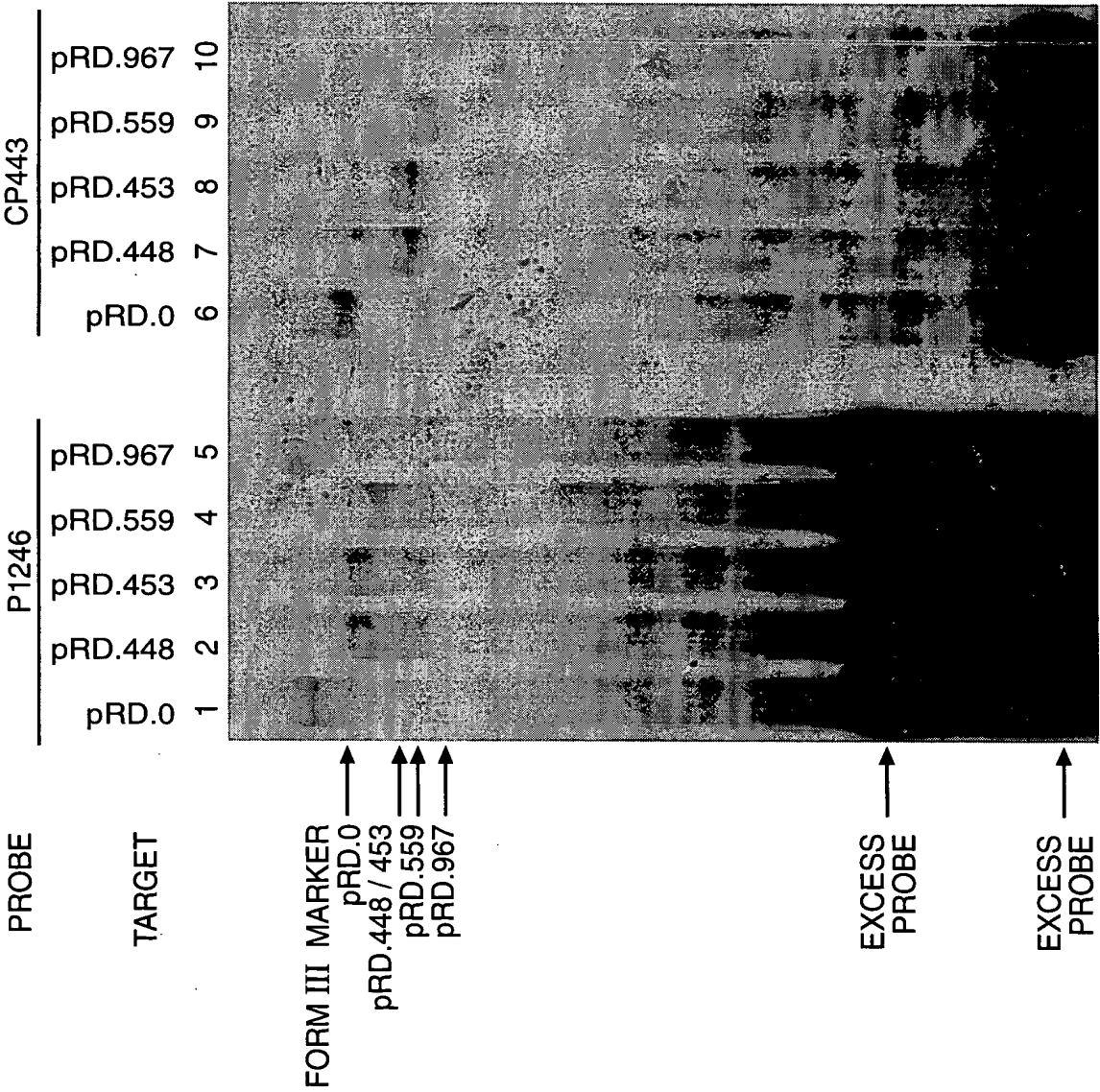


FIG._17B

TARGET DNA	AMT. HOMOL. (bp)	RELATIVE HYBRIDIZATION
pRD.0	1246	1.0
pRD.448	798	0.8
pRD.453	793	0.8
pRD.559	687	0.8
pRD.967	279	0.3

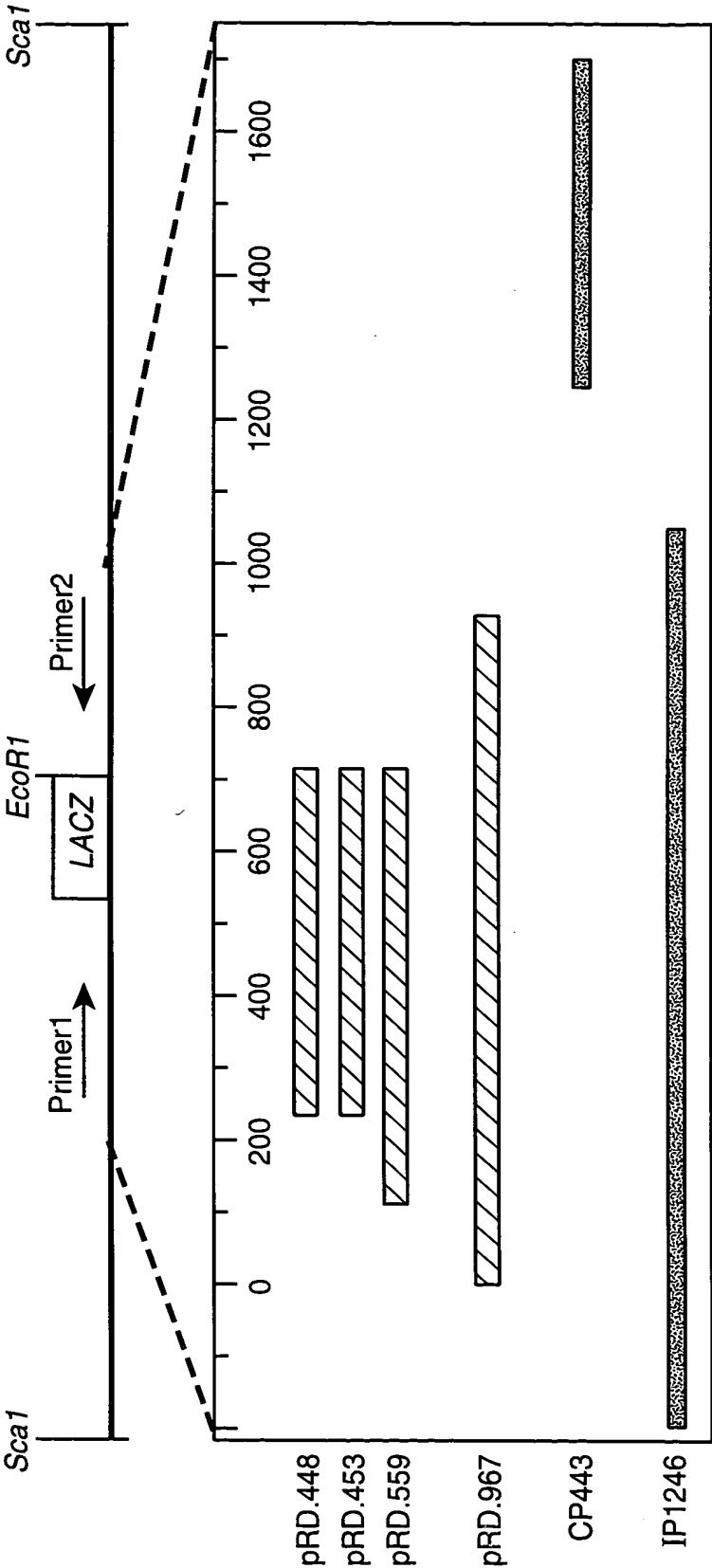
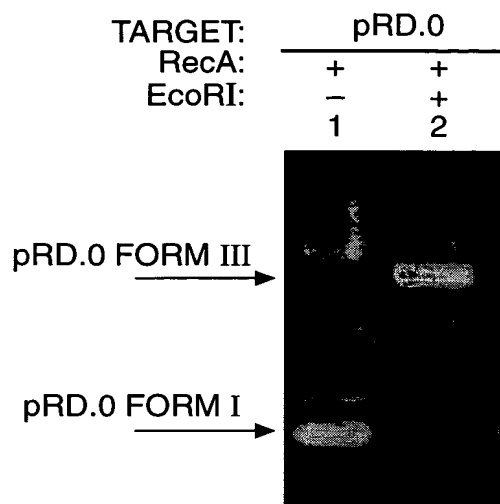
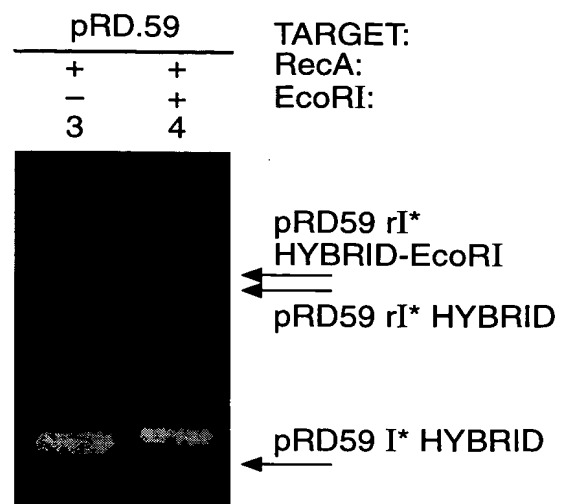
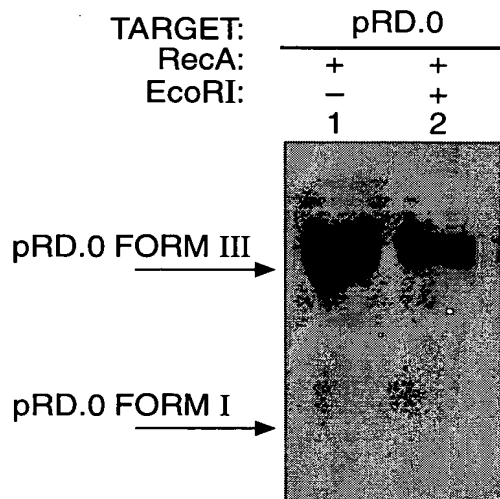
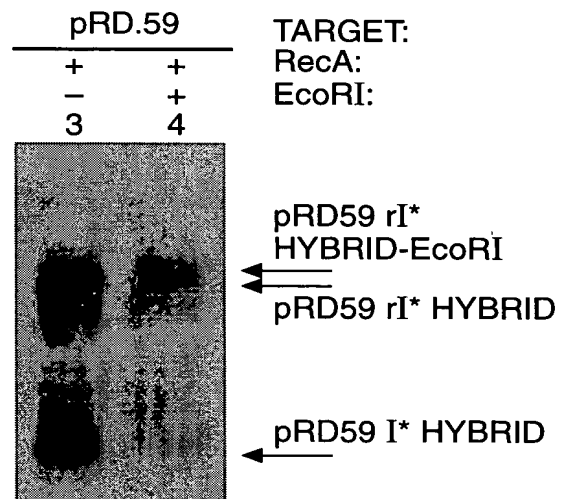


FIG._17C

**FIG._18A****FIG._18B****FIG._18C****FIG._18D**

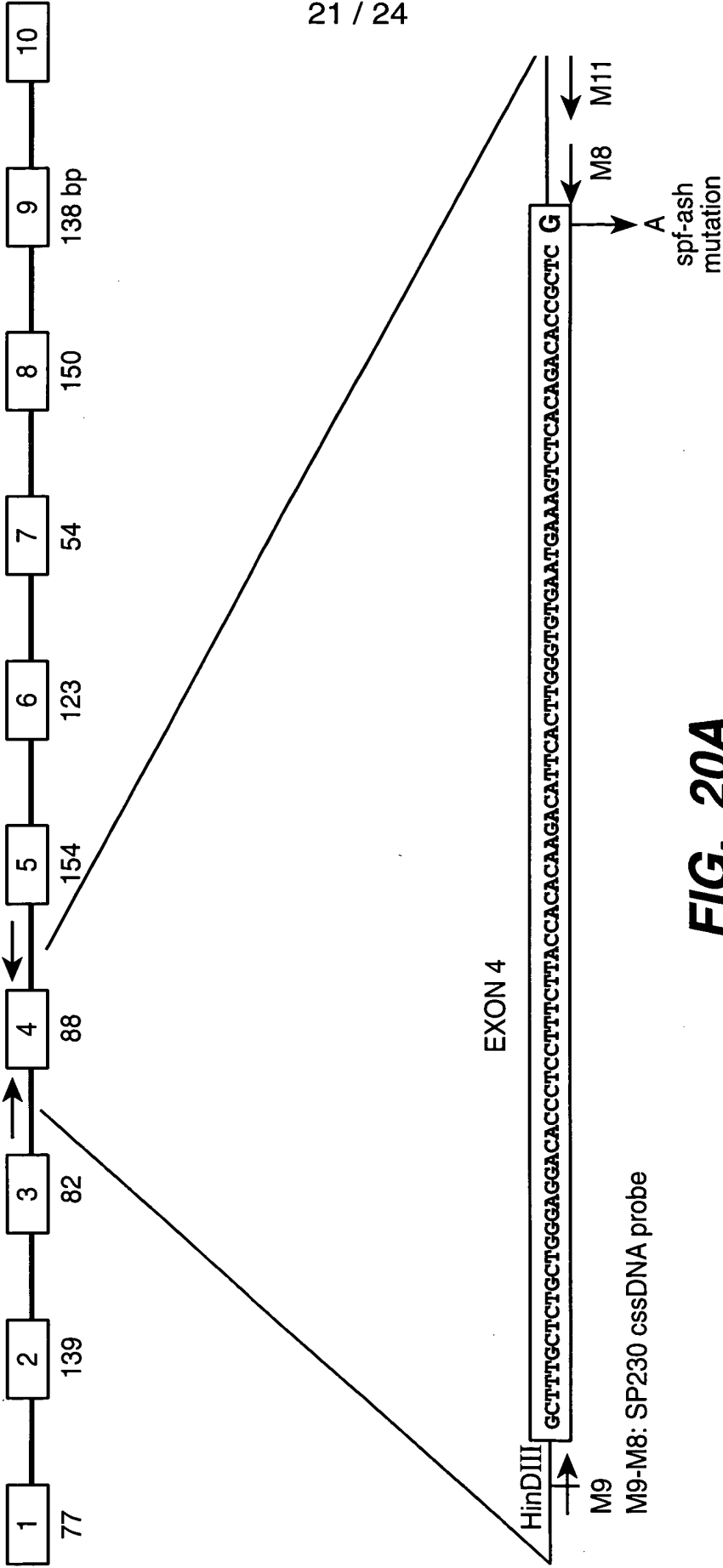


FIG._20A

FEMALE	MALE
○ + +	□ + / Y
○ spf-ash / spf-ash	■ spf-ash / Y
● spf-ash / +	▨ spf-ash / Y + / Y
	NORMAL
	HEMIZYGOUS MUTANT
	MOSAIC MUTANT

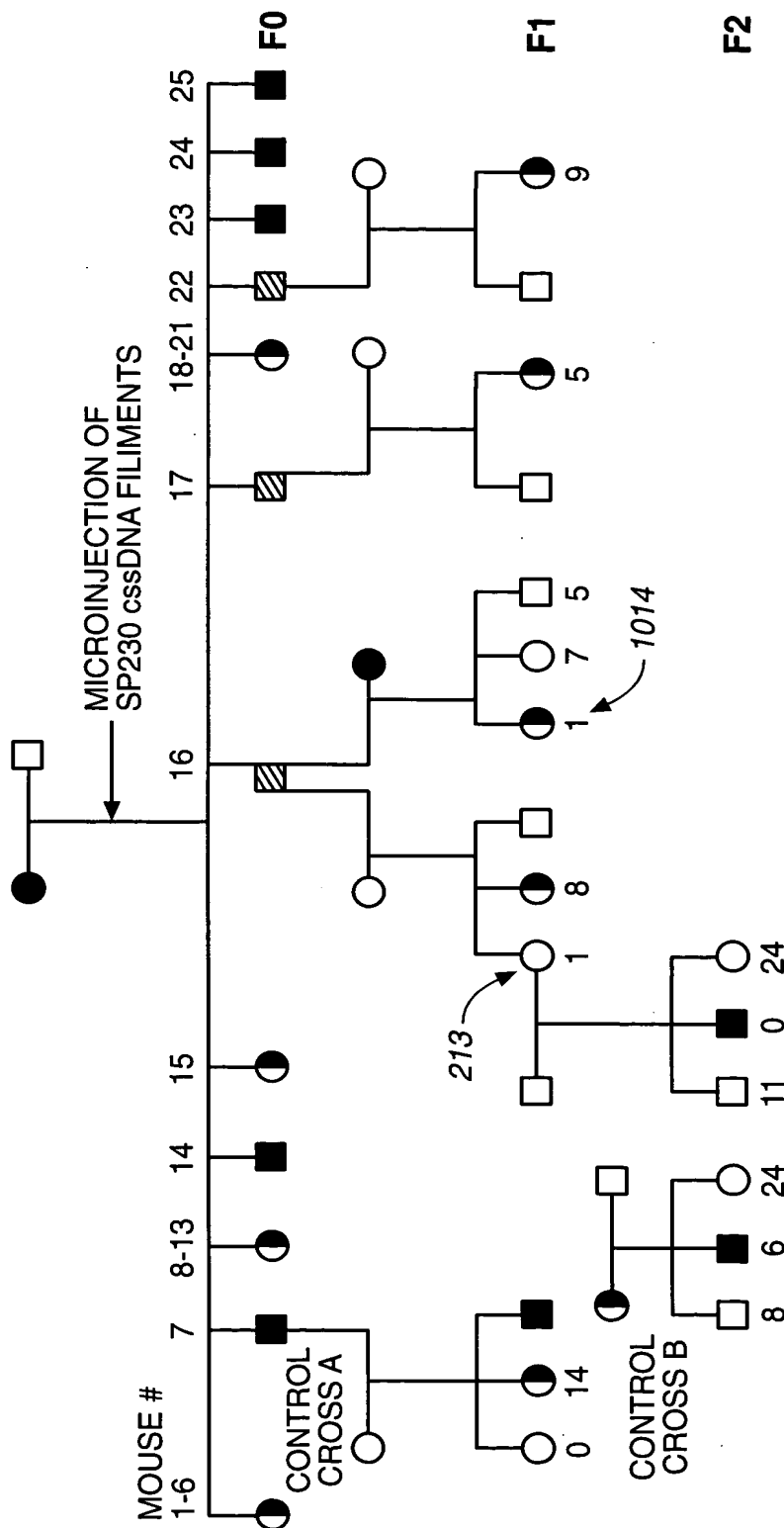
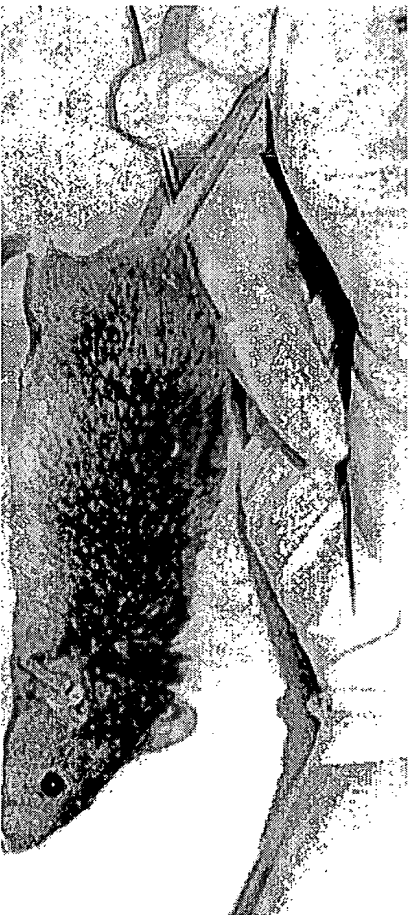


FIG. 22

X



HOMOZYGOUS
spf-ash / spf-ash
FEMALE PARENT

MUTANT F1
MALE PUP1



MUTANT F1
MALE PUP2



MUTANT F1
FEMALE PUP3



MUTANT F1
MALE PUP5



MUTANT F1
FEMALE PUP7



NORMAL *
F1 FEMALE
PUP1014



FIG. 23